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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,028

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Wen-Wei Su

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EXAMINER

PYO, KEVIN K

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,028

Applicant(s)

SU, WEN-WEI

Examiner

Kevin Pyo

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-247 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13/5, 178-181, 192-193/178, 192-193/180 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

1. Applicant's election with traverse of Group Ia-1-1 in the reply filed on 9/6/2005 is acknowledged.

The examiner notes the inadvertent inclusion of claim 14/5 in Group Ia-1-1 as well as in Group Ia-1-2. Claim 14/5 is directed to a second type of identification means (i.e. a plurality of convex portions) and therefore should have only been included in Group Ia-1-2. Accordingly, claim 14/5 will be withdrawn from consideration. In addition, claim 200 recites colored means as identification mark means and therefore claim 200 and 214-215/200 should have been included in Group Ia-1-3. Accordingly, claims 200 and 214-215/200 will be withdrawn from consideration.

In response to applicant's argument regarding claim 1, upon reconsideration, it is agreed that claims 1 and 2 are generic to Groups I and II. However, it should be noted that the inadvertent inclusion of claims 1 and 2 as generic claims in Groups Ia, Ib and Ic does not effect the outcome of which claims are examined in the present application since the examiner already indicated these claims (claims 1 and 2) along with the other generic claims (claims 3, 4, 178, 192-193/178) and the elected species (5, 7-13/5, 179-181, 192-193/180) would be examined in the present application. Accordingly, claims 1-5, 7-13/5, 178-181, 192-193/178, 192-193/180 will be examined in the present application.

In response to applicant's argument regarding MPEP 806, it was not found persuasive because the examiner has fulfilled the requirements for preparation of a requirement for species election as specifically set forth in MPEP 809.02. MPEP 806.04(f) is directed to the general test for whether a claim is restricted to a single species, not to the preparation of a requirement for

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species election between different species. Should applicant traverse on the ground that the species are not patently distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence of admission may be used in a rejection under 35 USC 103(a) of the other invention.

Applicant further argues that there is no serious burden on examining all species. The examiner disagrees with this argument. The fact that the search for different species overlaps does not necessarily eliminate a serious burden in examining different species.

The requirement is still deemed proper and is therefore made FINAL.

The non-elected claims should be canceled in order to expedite the prosecution.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference numbers mentioned throughout the specification (i.e. "10", "12", "13" in page 2; "30", "32", "33" in page 4; etc) are not shown in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

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accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. It is unclear what element(s) in Figures 7-22 are directed to a motor rotor (4) and a cylindrical shoulder (42). The identification of these elements in these Figures is crucial in determining the scope of claims.

In addition, applicant states in page 15, lines 5-10 that the slots (610), separating portions and first and second light beams with respect to the slots and separating portions are shown in Fig.23. However, the examiner cannot see these recited features in Fig.23. and applicant's cooperation is required to identify these features in Fig.23.

4. Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to because a sketch chart illustrating the output waveforms of the third prior art (shown in the third page of the drawings) is labeled as both Fig.4 and Fig.5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

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include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5 and 7-12/5 are rejected under 35 U.S.C. 102(b) as being anticipated by Osborne (5,107,107).

Regarding claim 1, Osborne shows in Fig.5 the following elements of applicant's invention: a) a light source (60); b) an identification mark means (track 62); c) a sensor (64) for

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detecting the light beams emitted by the light source and coming from the identification mark means.

Regarding claim 2, Osborne shows in Fig.5 a light source (60) is positioned beside the identification mark means (62).

Regarding claim 3, the limitation therein is shown in Fig.5.

Regarding claim 4, Osborne shows in Fig.6b the identification mark means (track 42) is positioned on a cylindrical shoulder (24) formed around the rotor (41) thereby rotating with the motor rotor synchronously.

Regarding claim 5, the limitation therein is shown in Fig.2.

Regarding claims 7/5 and 8/5, the limitations therein are shown in Fig.5.

Regarding claim 9/5, the limitation therein is disclosed in col.6, lines 34-37.

Regarding claims 10-12/5, the slots (58) and the separating portions (59) of Osborne are arranged so that the sensor (64) can produce alternative and consecutive binary code signals.

8. Claims 1-5 and 178 are rejected under 35 U.S.C. 102(b) as being anticipated by Blaser et al (5,198,738).

Regarding claims 1 and 178, Blaser et al shows in Fig.1 the following elements of applicant's invention: a) a light source (the optical sensor 7 would emit the light beam onto the reflective regions 5a-5c); b) an identification mark means (5a-5c) formed on an integral portion of the rotating shaft and having a specific pattern thereof; c) a sensor (7) for detecting the light beams emitted by the light source and coming from the identification mark means.

Regarding claims 2-4, the limitations therein are shown in Fig.1

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 179-181 and 192-193/178 or 180 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaser et al in view of Osborne.

Regarding claim 179, Blaser et al shows in Fig.1 the rotor (1) is encoded with alternating regions of high reflectivity and low reflectivity. Osborne shows in Fig.4 the similar reflective optical type arrangement. Osborne also shows in Fig.5 a more sophisticated reflective interferometric scheme having a grooved disk can be employed instead of the reflective optical arrangement of Fig.4. It would have been obvious to one of ordinary skill in the art to utilize an reflective interferometric arrangement instead of a reflective optical arrangement in view of the desire to improve accuracy.

Regarding claims 180-181, the limitations therein are disclosed in col.6, lines 12-37.

Regarding claims 192-193/178 or 180, the specific type of a light source and the specific configuration utilized, depending on the desired performance and design requirements, would have been obvious to one of ordinary skill in the art in view of meeting the needs of the particular application.

11. Claim 13/5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osborne.

Regarding claim 13/5, the specific type of a light source and the specific configuration utilized, depending on the desired performance and design requirements, would have been

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obvious to one of ordinary skill in the art in view of meeting the needs of the particular application.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
10/1/05